

Notice of Allowability

Application No.

10/028,385

Examiner

Juan A. Torres

Applicant(s)

MEEHAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment - After Non-Final Rejection filed on 04/05/2007.
2. ☒ The allowed claim(s) is/are 1, 3-7, 10-14 and 17-22 (renumbered to 1-17).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Larry Liberchuk on 4/19/2007.

The application has been amended as follows:

- a) In line 1 of claim 1 the recitation "enhancing the signal reception" is changed to "enhancing signal reception";
- b) In line 1 of claim 10 the recitation "enhancing the signal reception" is changed to "enhancing signal reception";
- c) In line 7 of claim 10 the recitation "(MSE); and" is changed to "(MSE);"
- d) In line 1 of claim 17 the recitation "enhancing the signal reception" is changed to "enhancing signal reception";
- e) In line 1 of claim 20 the recitation "enhancing the signal reception" is changed to "enhancing signal reception".

Drawings

The modifications to the drawings were received on 04/05/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 04/05/2007, the Examiner withdraws drawings objections of the previous Office action.

Specification

The modifications to the specification were received on 04/05/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 04/05/2007, the Examiner withdraws Specification objections of the previous Office action.

Claim Objections

The modifications to the claims were received on 04/05/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 04/05/2007, the Examiner withdraws claims objections to claims 3, 6, 7, 12, 13, 14, 16, 18 and 21 of the previous Office action.

Claim Rejections - 35 USC § 102

The modifications to the claims were received on 04/05/2007. These modifications are accepted by the Examiner.

In view of the amendment filed 04/05/2007, the Examiner withdraws claims rejections under 35 USC § 102 to claims 1, 3-5, 10-12 and 17-22 and 5 of the previous Office action.

Allowable Subject Matter

Claims 1, 3-7, 10-14 and 17-22 (renumbered to 1-17) are allowed.

The following is an examiner's statement of reasons for allowance: claims 1, 3-7, 10-14 and 17-22 (renumbered to 1-17) are allowed because the references cited fail to teach, as applicant has, a method for enhancing the signal reception of a digital wireless receiver, the method comprising the steps of extracting a preamble information from a

plurality of incoming signals, processing a first predetermined portion of said preamble information with a first antenna to produce a first preamble sequence, processing a second predetermined portion of said preamble information with a second antenna to produce a second preamble sequence, calculating a mean-square error (MSE) for said first preamble sequence received from said first antenna and said second preamble sequence received from said second antenna by separately comparing said first preamble sequence and said second preamble sequence with a predefined preamble sequence, generating a time-varying convergence rate based on said calculated MSE for said first preamble sequence and said preamble sequence, and selecting one of said first antenna and said second antenna having a faster convergence rate for subsequent reception of said incoming signals; a method for enhancing the signal reception of a digital wireless receiver, the method comprising the steps of receiving a plurality of incoming signals, dividing the header information of said incoming signals to process said divided header information by a first antenna and a second antenna, comparing said processed header information from said first antenna and said second antenna with a predefined preamble sequence to obtain a mean square error (MSE), generating a time-varying convergence rate based on said MSE for said first antenna and said second antenna and, selecting one of said first antenna and said second antenna having a faster convergence rate for subsequent reception of said incoming signals; an apparatus for enhancing the signal reception of a digital wireless receiver, comprising a processing circuit for processing a preamble information of incoming signals, wherein a first predetermined portion of said preamble information is applied to a first antenna and

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a second predetermined portion of said preamble information is applied to a second antenna to produce a plurality of processed signals, and said plurality of processed signals is compared to a predefined preamble sequence to obtain a mean-square error (MSE) for the respective first and second antenna, said processing circuit generating a time-varying convergence rate based on said MSE for said first antenna and said second antenna and, selecting one of said first antenna and said second antenna having a faster convergence rate for subsequent reception of said incoming signals; and an apparatus for enhancing the signal reception of incoming signals of a digital wireless receiver, comprising a first antenna for receiving said incoming signals, a second antenna for receiving said incoming signals, a processing circuit for processing a preamble information of said incoming signals, where a first predetermined portion of said preamble information is applied to said first antenna and a second predetermined portion of said preamble information is applied to said second antenna to produce a plurality of processed signals, and said plurality of processed signals is compared to a predefined preamble sequence to generate a mean-square error (MSE) for the respective first and second antenna, said processing circuit generating a time-varying convergence rate based on said MSE for said first antenna and said second antenna and, selecting one of said first antenna and said second antenna having a faster convergence rate for subsequent reception of said incoming signals, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is 571-272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
4-16-2007


TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER
4/16/07